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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/801,912

03/16/2004

Urs Ammon

16680

3076

4859

7590

12/28/2007

MACMILLAN SOBANSKI & TODD, LLC
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TOLEDO, OH 43604-1619

EXAMINER

COLON SANTANA, EDUARDO

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

12/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,912	Applicant(s) AMMON ET AL.	
	Examiner Eduardo Colon Santana	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/7/2007 has been entered.

2. Applicant's arguments with respect to the claims have been considered but they are still not persuasive. See Response to Arguments below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hakala et al. U.S. Patent No. 6,367,587.

Referring to claim 1, Hakala discloses an elevator drive machine including multiple electric motors and a traction sheave as claim (see all figures and respective portions of the specification). Hakala further depicts from figure 2, a pair of

space apart end plates (frames 3, 3a) each retaining an associated bearing (22); a pair of electric motors having rotors (17 or 117, 18 or 118) and stators (19 or 119, 20 or 120); a shaft (199) (see figures 6 and 7) having opposed free ends, and being rotatably supported by bearings (22 or 122), each free end of the shaft being drivingly connected to an associated one of the motors. Furthermore, Hakala discloses a traction sheave (2 or 102) supported by the shaft for rotation by the motors (see figures 2 and 5-7).

As to claim 15, Hakala addresses all the similar limitations of claim 1 above, and in addition depicts on figures 6 and 7, a pair of electric motors each motor having a stator (119, 120) respectively mounted on one of the bearing end plates. Additionally depicts the shaft (199) as seen in figure 6 and 7 having opposed free ends being rotatably supported by bearings (122) and that the each free end extends beyond an associated one of the bearing and have mounted thereon a rotor (117 and 118) of an associated one of the motors.

Referring to claim 16, each stator (19 or 119, 20 or 120) is mounted on an associated bearing end plate (22 or 122) by a cage housing as depicted in figures 2, 4 and 6.

As to claim 2, Hakala depicts in figures 2, 3, 6 and 7, rotors (17 or 117, 18 or 118) arranged on the associated free end of the shaft (199) and a stator (19 or 119, 20 or 120) mounted on an associated bearing end plate by a cage housing.

Referring to claims 3 and 17, Hakala et al. discloses at least one brake disk (9) (see figures 2 and 4) attached to the traction sheave (2) and at least one disk brake (brake shoe 25) acting on at least one brake disk (see Col. 4, lines 20-22 and Col. 5, lines 60-63).

As to claim 8, Hakala et al. discloses a secondary sheave (47) attached to the machine frame by a support (46) (see figure 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 4-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakala et al. in view of Albrich et al. U.S. Patent No. 6,429,554.

Referring to claims 4 and 9, Hakala et al. addresses all the similar limitations of claim 1 above, but does not explicitly describes having a drive unit with a plurality of frequency converters connected to the motors and operating in a master/slave mode. However, Albrich et al. discloses a system in which an electric motor is being used in cableway drives or lift systems wherein a plurality of frequency converters are connected to the motor and are operating in a master/slave mode (see claim 1). Additionally, Albrich discloses in figure 1, frequency converters (5a-5f).

Since Hakala et al. and Albrich et al. are in the same field of endeavor regarding lift systems, the purpose disclosed by Albrich would have been recognized in the pertinent art of Hakala et al.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have a plurality of frequency converters connected to each motors and operating in a master/slave mode as taught by Albrich within the teaching of Hakala et al. for the purpose/advantages that in the event of failure of one or more stator segments in the motor (i.e. winding short circuit or failures in the associated frequency converter) the electric motor can continue to run generally without additional measures, or in the worst case scenario, the other motor will continue to operate.

As to claims 5, 10 and 13, Albrich depicts from figure 1, a control portion (6a) of the master frequency converter (5a) that

would obviously specifies a total current distributed among the frequency converters (5b-5f), in which each of the slave frequency converters (5b-5f) would obviously include a current regulator for regulating a current based upon a reference current value and an actual current value as detected by a current detection device (9a).

Referring to claims 6 and 11, Albrich depicts from figure 1, a bus system connecting frequency converters (5a-5f) for communicating at least one of reference-current, synchronization signals and identification signals from the main control device (11).

As to claims 7 and 12, Albrich et al. discloses a resolver line (15), representing an actual rotational speed of a motor shaft by a tachogenerator (not shown, but implied, see dotted line 15) coupled to the shaft and the control portion (6a), which generates a signal representing a reference rotational speed (see in addition figure 1 and Col. 3, lines 31-41). Moreover, Hakala et al. discloses having a tachometer (13) (see figure 1).

As to claim 14, Hakala et al. discloses a secondary sheave (47) attached to the machine frame by a support (46) (see figure 5).

Response to Arguments

5. Applicant's arguments filed on 12/07/2007 have been fully considered but they are not persuasive.

It is believed that the prior art of record still reads on the claims as they have been presented.

In regards to applicant's remarks that Hakala et al. does not teach or suggest to describe having a shaft and a traction sheave supported by the shaft of the motors is not persuasive. Hakala et al. clearly shows a pair of motors each having rotors (17 or 117, 18 or 118) and stators (19 or 119, 20 or 120), which rotate in a shaft (199) as seen in figures 2, 3, 6 and 7, and being supported by rotors (17 or 117, 18 or 118), which are part of the pair of motors.

With regards to the new claims 15-17, the examiner recognizes that Hakala et al. depicts the rotors (17 or 117, 18 or 118) being mounted on bearing (22 or 122), however, Hakala clearly shows the bearings (22 or 122) are supported on each free end of the shaft (199), which the free end extends beyond an associated bearing (see figure 6 and 7).

In regards to applicant's argument, which Hakala describes in Col. 3, Lines 3-10 that the drive machine does not have a drive shaft, is not correct. Applicant has misconstrued the statement "...transmit the torque, power and forces directly from the machine to the traction sheave without a separate drive shaft." Hakala clearly shows two motors, each having a rotor and a stator, which rotate in a shaft (199) as clearly depicted from figures 6 and 7 and having a traction sheave (102) supported by the shaft for rotation by the motors. Hakala et al. states as best understood in Col. 3, Lines 3-10, that the transmission of the torque, power and forces directly from the machine to the

traction sheave can be done with only one drive shaft (emphasis added) not two separate drive shaft.


No other elements in claims 2-8 and 10-14 are being addressed in the remarks filed 12/07/2007.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon Santana whose telephone number is (571) 272-2060. The examiner can normally be reached on Monday thru Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval system. For more information see <http://pair-direct.uspto.gov>. Should you have questions, contact the Electronic Business Center (EBC) at 866-217-9197. If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 or 571-272-1000.


Eduardo Colon-Santana
Patent Examiner
Art Unit 2837

/ECS/
December 20, 2007